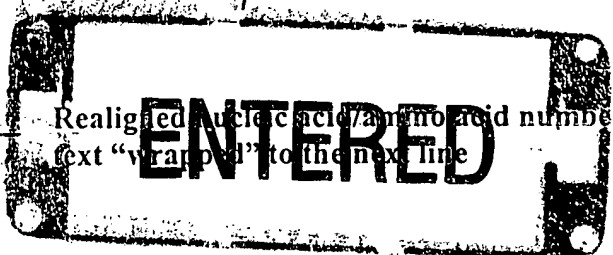


P4/10

**CRF Errors Edited by the STIC Systems
Branch**

Serial Number: 10/505,230

CRF Edit Date: 9/2/04
Edited by: Re



Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

___ Corrected the SEQ ID NO. Sequence numbers edited were:

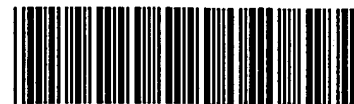
___ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

___ Deleted: ___ invalid beginning/end-of-file text ; ___ page numbers

___ Inserted mandatory headings/numeric identifiers, specifically:

___ Moved responses to same line as heading/numeric identifier, specifically:

___ Other:



PCT

RAW SEQUENCE LISTING

DATE: 09/02/2004

PATENT APPLICATION: US/10/505,230

TIME: 17:26:27

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\09022004\J505230.raw

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3 <110> APPLICANT: VAN DEN BRINK, Gijs Robert
4     PEPPELENBOSCH, Maikel Petrus
5     HARDWICK, Hames Christopher Henry
6     VAN DEVENTER, Sander Jan Hendrik
8 <120> TITLE OF INVENTION: Hedgehog-related prophylaxis, therapy and diagnosis of
9     GI tract carcinogenesis
11 <130> FILE REFERENCE: 28902.nob10
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/505,230
14 <141> CURRENT FILING DATE: 2004-08-20
16 <150> PRIOR APPLICATION NUMBER: PCT/NL03/00127
17 <151> PRIOR FILING DATE: 2003-02-20
19 <150> PRIOR APPLICATION NUMBER: EP 02075690.4
20 <151> PRIOR FILING DATE: 2002-02-20
22 <160> NUMBER OF SEQ ID NOS: 3
24 <170> SOFTWARE: PatentIn Ver. 2.1
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 396
28 <212> TYPE: PRT
29 <213> ORGANISM: Homo sapiens
31 <220> FEATURE:
32 <223> OTHER INFORMATION: Human Desert Hedgehog protein
34 <400> SEQUENCE: 1
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37   1      .      5      10      15
39 Ala Leu Pro Ala Gln Ser Cys Gly Pro Gly Arg Gly Pro Val Gly Arg
40      20      25      30
42 Arg Arg Tyr Ala Arg Lys Gln Leu Val Pro Leu Leu Tyr Lys Gln Phe
43      35      40      45
45 Val Pro Gly Val Pro Glu Arg Thr Leu Gly Ala Ser Gly Pro Ala Glu
46      50      55      60
48 Gly Arg Val Ala Arg Gly Ser Glu Arg Phe Arg Asp Leu Val Pro Asn
49      65      70      75      80
51 Tyr Asn Pro Asp Ile Ile Phe Lys Asp Glu Glu Asn Ser Gly Ala Asp
52      85      90      95
54 Arg Leu Met Thr Glu Arg Cys Lys Glu Arg Val Asn Ala Leu Ala Ile
55      100     105     110
57 Ala Val Met Asn Met Trp Pro Gly Val Arg Leu Arg Val Thr Glu Gly
58      115     120     125
60 Trp Asp Glu Asp Gly His His Ala Gln Asp Ser Leu His Tyr Glu Gly
61      130     135     140
63 Arg Ala Leu Asp Ile Thr Ser Asp Arg Asp Arg Asn Lys Tyr Gly
64      145     150     155     160
66 Leu Leu Ala Arg Leu Ala Val Glu Ala Gly Phe Asp Trp Val Tyr Tyr

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/505,230

DATE: 09/02/2004

TIME: 17:26:27

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\09022004\J505230.raw

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67          165          170          175
69 Glu Ser Arg Asn His Val His Val Ser Val Lys Ala Asp Asn Ser Leu
70          180          185          190
72 Ala Val Arg Ala Gly Gly Cys Phe Pro Gly Asn Ala Thr Val Arg Leu
73          195          200          205
75 Trp Ser Gly Glu Arg Lys Gly Leu Arg Glu Leu His Arg Gly Asp Trp
76          210          215          220
78 Val Leu Ala Ala Asp Ala Ser Gly Arg Val Val Pro Thr Pro Val Leu
79 225          230          235          240
81 Leu Phe Leu Asp Arg Asp Leu Gln Arg Arg Ala Ser Phe Val Ala Val
82          245          250          255
84 Glu Thr Glu Trp Pro Pro Arg Lys Leu Leu Leu Thr Pro Trp His Leu
85          260          265          270
87 Val Phe Ala Ala Arg Gly Pro Ala Pro Ala Pro Gly Asp Phe Ala Pro
88          275          280          285
90 Val Phe Ala Arg Arg Leu Arg Ala Gly Asp Ser Val Leu Ala Pro Gly
91          290          295          300
93 Gly Asp Ala Leu Arg Pro Ala Arg Val Ala Arg Val Ala Arg Glu Glu
94 305          310          315          320
96 Ala Val Gly Val Phe Ala Pro Leu Thr Ala His Gly Thr Leu Leu Val
97          325          330          335
99 Asn Asp Val Leu Ala Ser Cys Tyr Ala Val Leu Glu Ser His Gln Trp
100          340          345          350
102 Ala His Arg Ala Phe Ala Pro Leu Arg Leu Leu His Ala Leu Gly Ala
103          355          360          365
105 Leu Leu Pro Gly Gly Ala Val Gln Pro Thr Gly Met His Trp Tyr Ser
106          370          375          380
108 Arg Leu Leu Tyr Arg Leu Ala Glu Glu Leu Leu Gly
109 385          390          395
112 <210> SEQ ID NO: 2
113 <211> LENGTH: 293
114 <212> TYPE: PRT
115 <213> ORGANISM: Homo sapiens
117 <220> FEATURE:
118 <223> OTHER INFORMATION: Human Indian Hedgehog protein
120 <400> SEQUENCE: 2
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122 1          5          10          15
124 Glu Asp Gly His His Ser Glu Glu Ser Leu His Tyr Glu Gly Arg Ala
125          20          25          30
127 Val Asp Ile Thr Thr Ser Asp Arg Asp Arg Asn Lys Tyr Gly Leu Leu
128          35          40          45
130 Ala Arg Leu Ala Val Glu Ala Gly Phe Asp Trp Val Tyr Tyr Glu Ser
131          50          55          60
133 Lys Ala His Val His Cys Ser Val Lys Ser Glu His Ser Ala Ala Ala
134 65          70          75          80
136 Lys Thr Gly Gly Cys Phe Pro Ala Gly Ala Gln Val Arg Leu Glu Ser
137          85          90          95
139 Gly Ala Arg Val Ala Leu Ser Ala Val Arg Pro Gly Asp Arg Val Leu

```

RAW SEQUENCE LISTING

DATE: 09/02/2004

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TIME: 17:26:27

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\09022004\J505230.raw

```

140          100          105          110
142 Ala Met Gly Glu Asp Gly Ser Pro Thr Phe Ser Asp Val Leu Ile Phe
143          115          120          125
145 Leu Asp Arg Glu Pro His Arg Leu Arg Ala Phe Gln Val Ile Glu Thr
146          130          135          140
148 Gln Asp Pro Pro Arg Arg Leu Ala Leu Thr Pro Ala His Leu Leu Phe
149 145          150          155          160
151 Thr Ala Asp Asn His Thr Glu Pro Ala Ala Arg Phe Arg Ala Thr Phe
152          165          170          175
154 Ala Ser His Val Gln Pro Gly Gln Tyr Val Leu Val Ala Gly Val Pro
155          180          185          190
157 Gly Leu Gln Pro Ala Arg Val Ala Ala Val Ser Thr His Val Ala Leu
158          195          200          205
160 Gly Ala Tyr Ala Pro Leu Thr Lys His Gly Thr Leu Val Val Glu Asp
161          210          215          220
163 Val Val Ala Ser Cys Phe Ala Ala Val Ala Asp His His Leu Ala Gln
164 225          230          235          240
166 Leu Ala Phe Trp Pro Leu Arg Leu Phe His Ser Leu Ala Trp Gly Ser
167          245          250          255
169 Trp Thr Pro Gly Glu Gly Val His Trp Tyr Pro Gln Leu Leu Tyr Arg
170          260          265          270
172 Leu Gly Arg Leu Leu Leu Glu Glu Gly Ser Phe His Pro Leu Gly Met
173          275          280          285
175 Ser Gly Ala Gly Ser
176          290
179 <210> SEQ ID NO: 3
180 <211> LENGTH: 462
181 <212> TYPE: PRT
182 <213> ORGANISM: Homo sapiens
184 <220> FEATURE:
185 <223> OTHER INFORMATION: Human Sonic hedgehog protein
187 <400> SEQUENCE: 3
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191 Leu Val Cys Ser Gly Leu Ala Cys Gly Pro Gly Arg Gly Phe Gly Lys
192          20          25          30
194 Arg Arg His Pro Lys Lys Leu Thr Pro Leu Ala Tyr Lys Gln Phe Ile
195          35          40          45
197 Pro Asn Val Ala Glu Lys Thr Leu Gly Ala Ser Gly Arg Tyr Glu Gly
198          50          55          60
200 Lys Ile Ser Arg Asn Ser Glu Arg Phe Lys Glu Leu Thr Pro Asn Tyr
201 65          70          75          80
203 Asn Pro Asp Ile Ile Phe Lys Asp Glu Glu Asn Thr Gly Ala Asp Arg
204          85          90          95
206 Leu Met Thr Gln Arg Cys Lys Asp Lys Leu Asn Ala Leu Ala Ile Ser
207          100          105          110
209 Val Met Asn Gln Trp Pro Gly Val Lys Leu Arg Val Thr Glu Gly Trp
210          115          120          125
212 Asp Glu Asp Gly His His Ser Glu Glu Ser Leu His Tyr Glu Gly Arg

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/505,230

DATE: 09/02/2004

TIME: 17:26:27

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\09022004\J505230.raw

```

213      130      135      140
215 Ala Val Asp Ile Thr Thr Ser Asp Arg Asp Arg Ser Lys Tyr Gly Met
216 145      150      155      160
218 Leu Ala Arg Leu Ala Val Glu Ala Gly Phe Asp Trp Val Tyr Tyr Glu
219      165      170      175
221 Ser Lys Ala His Ile His Cys Ser Val Lys Ala Glu Asn Ser Val Ala
222      180      185      190
224 Ala Lys Ser Gly Gly Cys Phe Pro Gly Ser Ala Thr Val His Leu Glu
225      195      200      205
227 Gln Gly Gly Thr Lys Leu Val Lys Asp Leu Ser Pro Gly Asp Arg Val
228      210      215      220
230 Leu Ala Ala Asp Asp Gln Gly Arg Leu Leu Tyr Ser Asp Phe Leu Thr
231 225      230      235      240
233 Phe Leu Asp Arg Asp Asp Gly Ala Lys Lys Val Phe Tyr Val Ile Glu
234      245      250      255
236 Thr Arg Glu Pro Arg Glu Arg Leu Leu Thr Ala Ala His Leu Leu
237      260      265      270
239 Phe Val Ala Pro His Asn Asp Ser Ala Thr Gly Glu Pro Glu Ala Ser
240      275      280      285
242 Ser Gly Ser Gly Pro Pro Ser Gly Gly Ala Leu Gly Pro Arg Ala Leu
243      290      295      300
245 Phe Ala Ser Arg Val Arg Pro Gly Gln Arg Val Tyr Val Val Ala Glu
246 305      310      315      320
248 Arg Asp Gly Asp Arg Arg Leu Leu Pro Ala Ala Val His Ser Val Thr
249      325      330      335
251 Leu Ser Glu Glu Ala Ala Gly Ala Tyr Ala Pro Leu Thr Ala Gln Gly
252      340      345      350
254 Thr Ile Leu Ile Asn Arg Val Leu Ala Ser Cys Tyr Ala Val Ile Glu
255      355      360      365
257 Glu His Ser Trp Ala His Arg Ala Phe Ala Pro Phe Arg Leu Ala His
258      370      375      380
260 Ala Leu Leu Ala Ala Leu Ala Pro Ala Arg Thr Asp Arg Gly Gly Asp
261 385      390      395      400
263 Ser Gly Gly Gly Asp Arg Gly Gly Gly Gly Arg Val Ala Leu Thr
264      405      410      415
266 Ala Pro Gly Ala Ala Asp Ala Pro Gly Ala Gly Ala Thr Ala Gly Ile
267      420      425      430
269 His Trp Tyr Ser Gln Leu Leu Tyr Gln Ile Gly Thr Trp Leu Leu Asp
270      435      440      445
272 Ser Glu Ala Leu His Pro Leu Gly Met Ala Val Lys Ser Ser
273      450      455      460

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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/505,230

DATE: 09/02/2004

TIME: 17:26:28

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\09022004\J505230.raw

L:13 M:270 C: Current Application Number differs, Replaced Current Application Number